

SEPTEMBER, 1906

Issued Every Month  
for Free Distribution to all Users  
of Machine Tools

# HITCHCOCK'S MACHINE TOOL LIST

A Reference Book for Owners  
of Iron Working Machinery

Published by  
A. H. HITCHCOCK

225 West Broadway, Chicago, Ill.

# **DOUBLE THE POWER**

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## **OF YOUR**

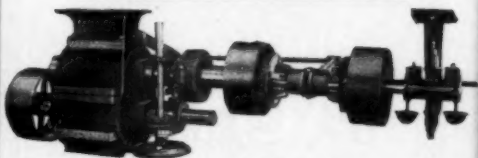
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### **CONE PULLEY MACHINES**

By substituting a large diameter, single pulley drive, with broad belt, which gives **more than twice the power** per revolution averaged from a step pulley, and make your speed changes with our

#### **IMPROVED SPEED CHANGER**

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This practical and efficient device gives six changes of speed at a six to one ratio, is easily handled and makes all changes in a few seconds. The speed-changing mechanism is self-contained in an oil-tight case, and is simple, strong and positive.

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#### **ASK FOR FULL DESCRIPTIVE CIRCULAR**

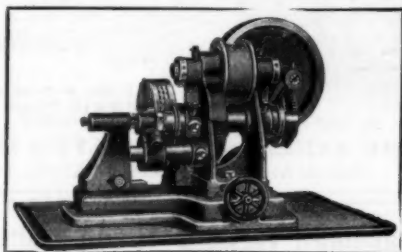
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If at the same time you will send us the following data, we can give you more exact information, to suit your individual requirements, namely:

1. Kind of machine to be driven.
2. Size of pulley on machine.
3. Width of belt you are using and whether single or double.
4. Fastest and slowest speed you want machine to run.
5. Number of R. P. M. of your line shaft.
6. Whether device is to hang from ceiling, stand on floor or bolt to wall.

**National Machine Tool Co.**  
208-10 Lawrence St. :: Cincinnati, Ohio

THE  
**"Acme"**  
**Semi-Automatic**  
**Screw Slotting Machine**



**F**OR slotting all styles of brass, iron and steel screws. Speed limit is cutting capacity of the saw. Interchangeable discs for different diameters.

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**Cleveland, Ohio, U. S. A.**

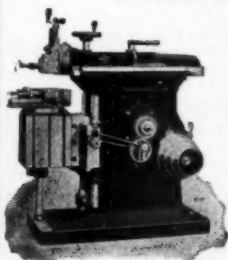
***Branch Offices: New York and Chicago***

**FOREIGN REPRESENTATIVES:**

***Alfred H. Schutte***

***Schuchardt & Schutte***

## A TOOL WITH A RECORD THE CINCINNATI BACK GEARED CRANK SHAPER



No. 1610—16 inch.

You may refer to any shop where it is used and find that it leads all tools of its kind for the perfection, quantity and absolute reliability of its work. These qualities go into it in the making, and they are there as long as the machine lasts—and that's a good while. We are anxious that Shaper users should know just how good this machine is—that they should study its features and learn for themselves wherein it is better than others.

That is why we want to  
send you our Shaper  
Book. May we?

**THE CINCINNATI SHAPER CO.**  
Colerain Ave. & Elam St., CINCINNATI, O.

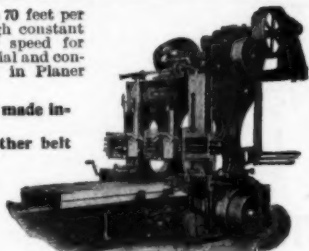
## Cincinnati Variable Speed Planers

Give you from 15 to 70 feet per minute, with a high constant return. A proper speed for every kind of material and condition. The ideal in Planer construction.

**Changes can be made instantly.**

**Adaptable to either belt or motor drive.**

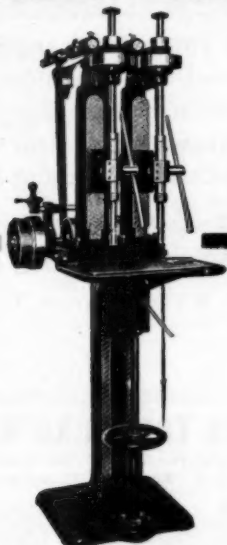
**An increase in output of from thirty to fifty per cent.**



— Catalogue? —

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Cincinnati, O., U. S. A.

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(PATENTED.)

**I**T will give a list of prominent manufacturers using from one to two hundred spindles each, any one of which can be referred to for confirmation of the extraordinary statements made about our BALL-BEARING DRILL PRESSES.

Order a machine. The first order will certainly be followed by others up to your requirements.

**The Henry & Wright Mfg. Co.**

111-135 Sheldon St., Hartford, Conn.

If you require anything  
special in a machine tool  
to reduce your labor cost  
you cannot do better than  
to let us know about it.

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"Two heads are better than one"

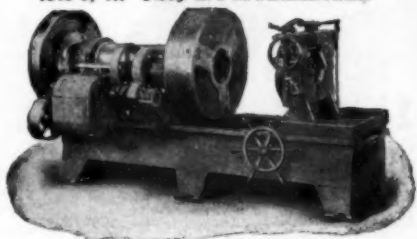
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**MASSEY MACHINE CO.**

101 PEARL ST.,  
WATERTOWN, N. Y.

## **OUR PIPE THREADING MACHINES**

*are built for hard, rapid work, and  
lots of it. They are MODERNIZED*

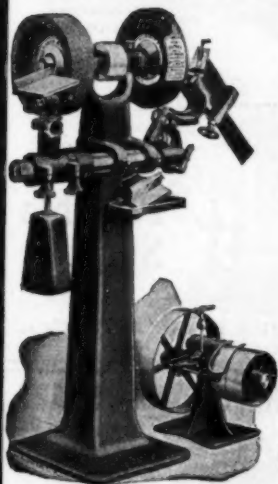


All Sizes from  $\frac{1}{4}$  inch to 12 inch. Belt and Motor Driven

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Myerstown, Pa.

**YOU CANNOT PUT \$75<sup>00</sup>**



where it will pay  
as big interest as  
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particular

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**Combined**

**Drill and**

**Swinging**

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The large num-  
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testify to this.

It grinds drills almost with your eyes closed,  
so both lips are exactly the same length and  
angle, and consequently so they'll do many  
times as much work as when ground by hand.  
And then there's the other side, which grinds  
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a 10x3 cupped wheel. Above price is complete  
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**Reaming,  
Tapping,  
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Polishing.**

In any place that is difficult to reach, is always expensive except where the

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## COATES UNIT LINK FLEXIBLE SHAFT



By the use of the

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a very high speed may be obtained. This multiplier increases the speed  $8\frac{1}{2}$  to 1. This gives a great latitude to the adaptability of such an outfit. It is furnished motor driven or rope driven. Handy for grinding die work, metal pattern work, internal grinding in connection with lathe work.

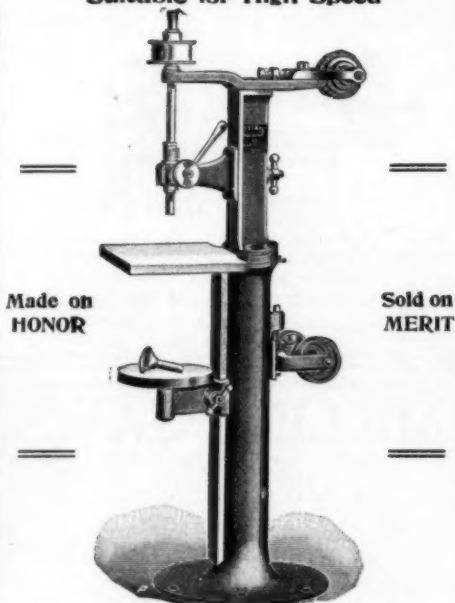
A speed of 21,000 revolutions per minute means something. Take the multiplier off and use the same device for heavy grinding or buffing. **Send for Book No. 299.**

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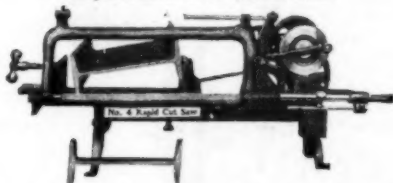
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which is well worth the asking*

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**OVER 9,000 IN USE**

Six sizes, 4x4 to 12x15 in. Save their cost in two weeks. No shop can afford to be without them.



If you want reliable power, get the **Robertson's Straight Line Gas or Gasolene Engine**. More reliable than steam.

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**Largest Makers of Metal Saws in the World**

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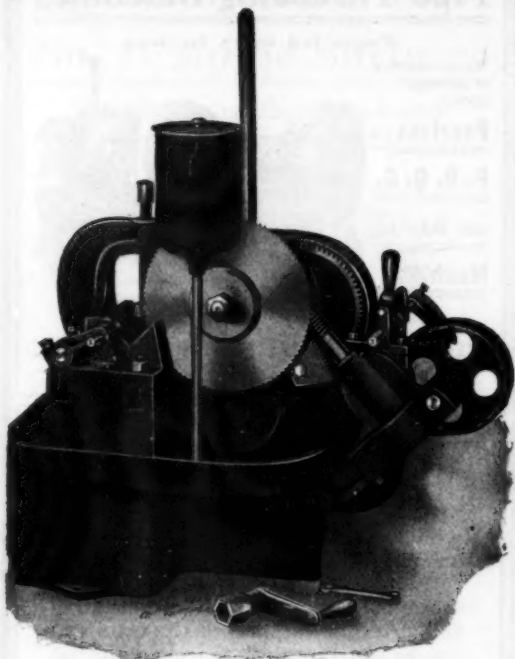
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You will know something of the best saws only when you use material that is built the best the builders know. We have built good saws for forty years.

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Will Cut  $3\frac{1}{4}$  Inch Steel Bars in Five Minutes

Compact, simple, accurate; no noise or vibration; anyone can run it; nothing to get out of order; powerful drive; the kind you need.

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Metal Sawing Machines..Filing Machines..Saw Sharpening Machines

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From 1-4 to 18 Inches

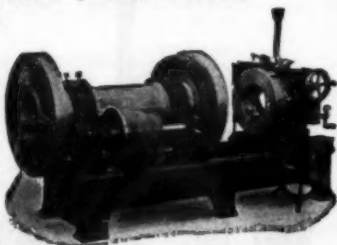
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**Peerless,**

**P. D. Q. C.**

**and Duplex**

**Machines**



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## Sellers of Machinery

which is used in machine shops of any kind, should investigate carefully the facilities offered by **Hitchcock's Machine Tool List** for reaching this trade in all parts of the country. Its 25,000 circulation—one copy to each shop—covers this field with a thoroughness and effectiveness not equalled by any other advertising medium.

# American No. 1½ Single Surfacers

An Especially Convenient and  
Serviceable Tool for the  
Pattern Shop

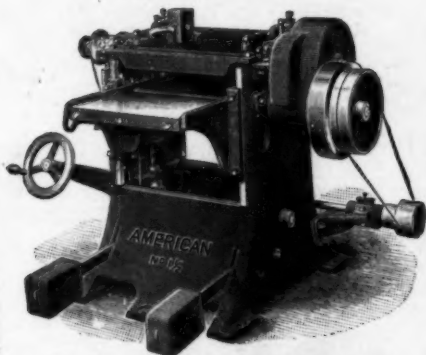


Fig. 7911. American No. 1½ Single Surfacers.

Will work 20x24 in. wide and from  $\frac{1}{16}$  to 7 in. thick. Has four feed rolls; in-feeding roll is fluted. It is a very strong, simple and effective machine.

*For Prices of the Above or Other  
Woodworking Machinery address*

**AMERICAN  
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## LET US BUILD YOUR MACHINE ON CONTRACT

We have a thoroughly equipped, up-to-date shop, and we can effect economies in the construction of machines that are impossible with ordinary facilities. Why not take the matter up with us, and see if we can not save you some money? You will find us resourceful, painstaking, efficient; we have good designs, competent mechanics, modern tools, and the knack of knowing how that comes from a varied and successful experience. We can handle any machine up to two tons weight.

### SPECIAL TOOLS BUILT TO ORDER

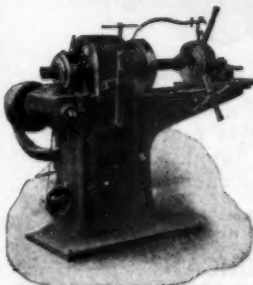
Tell us what you want a machine to do. Maybe we can design and build for you a tool that will do the work satisfactorily and at smaller cost.

OUR ADVICE COSTS YOU NOTHING ANYWAY  
GLAD TO HAVE YOU CONSULT US

**C. H. COWDREY MACHINE WORKS**  
**FITCHBURG, MASS.**

Government Contractors for Special Tools

## Williams Pipe Threaders are Profitable Tools



No. 1 $\frac{1}{2}$ , Cutting  $\frac{1}{2}$  to 3 Inches.

— BECAUSE —  
they accomplish the purpose for which they are constructed — to thread pipes rapidly, accurately, at least cost for attendance, and at practically no cost for repairs. That the Williams machines do this, our customers will gladly tell you, and you know if they do that they must be right in design and construction. Their practical, every-day work in hundreds of shops, where they are giving the highest satisfaction, proves their merit. If you thread pipe you ought to know more about them.

Let us tell you

**WILLIAMS TOOL CO. . . Erie, Pa.**

# FOR YOUR PATTERN SHOP



PATTERN MAKERS BAND SAWS  
Table Tilt Both Ways



PATTERN ASSEMBLY AND CHUCKERS

PATTERN MAKERS VARIETY SAW BUNCHES  
Table Tilt 45 Degrees



PATTERN MAKERS WOOD LATHES  
All Sizes and With Tool Rests



PATTERN MAKERS HAND PLANES OR JOINTERS  
Also With Tiling Table for Drafts

These machines are designed and built with especial reference to pattern making and embody in the highest degree the qualities of accuracy, convenience and reliability essential in this exacting work. They form part of our line of modern, high grade woodworking tools and we guarantee them absolutely. We furnish complete outfits for pattern shops and woodworking plants. Let us quote on your next requirement in wood tools.

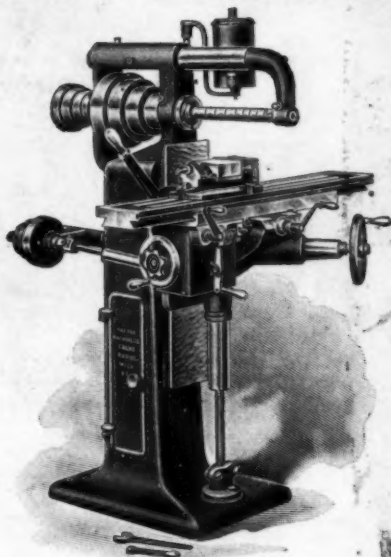
Consult with Us About Your Pattern Shop Equipment

**Chicago Machinery Exchange**

13 and 15 N. Canal Street, Chicago

Send for List of Slightly Used and Rebuilt Woodworking Machines

# FOX MILLERS



Fox Millers are made in three different styles, comprising plain hand millers and combined hand and power machines. These have many unique features, including back gearing inside main driving cone; hand rack feed combined with either hand or power screw feed, etc. The range of the above machine is 24x6x14  $\frac{1}{4}$ .

We also make a superior line of sensitive drills, polishing machines and tube and pipe cutters.

*Printed matter gives particulars of each  
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## FOX MACHINE

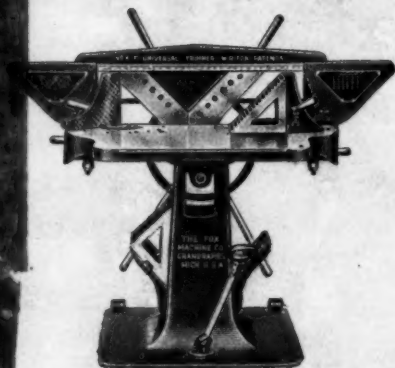


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# BOX TRIMMERS

## FOR THE

### PATTERN SHOP



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Pattern shop is completely equipped without an up-wood trimmer.

her trimmer is up to date when compared with 8 F, shown above.

individual machine in a complete equipment will great an interest on the investment.

machine will very largely eliminate the usual work with planes and chisels. You know what means.

trimmers are made in a great variety of styles sizes to just suit every case.  
the new bulletin.

*We make a specialty of complete pattern-shop equipment. Catalog of same furnished on request*

**225 NORTH FRONT ST.,  
GRAND RAPIDS, MICH.**

IF YOUR IDEA OF ECONOMY IS QUALITY

## Try the Geometric Tools

They are the best threading, tapping and milling tools on the market. Send samples and **let us estimate** on a suitable equipment of tools to cover your requirements



For sale by a  
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Write us your  
requirements  
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**THE GEOMETRIC TOOL CO., New Haven, Conn.**

### When You Inquire

of advertisers herein, won't you kindly remember to say somewhere in your communication that the inquiry comes from Hitchcock's Machine Tool List? Advertisers are human; they like to know that the medium in which they spend their money is received and consulted by machinery users. Not being mind readers, they can only know this when you tell them, and if you neglect to tell them, the Tool List is deprived of credit for the service it has rendered.

# Cut Any Key Seats?

IF YOU DO  
WE CAN SAVE YOU MONEY

Use an Ordinary Drill Press



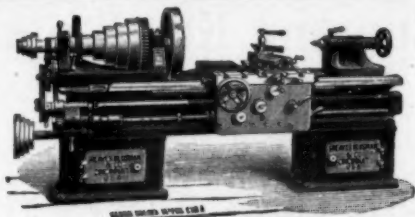
Let a Bright Boy Run It

## And With Our Keyseating Tools

you can do absolutely accurate keyseating in from 50 to 75 per cent less time, and at proportionately less cost, than the work can possibly be turned out by any other method. Your drill press, with these attachments, is as good a keyseater as you can buy for money. It makes either straight or tapered seats, and its work is so perfect that no filing is required in fitting the key. With a special cutter, it makes rounded oil grooves as well.

The first cost is small—The saving goes  
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**National Machine Tool Co.**  
208-10 Lawrence St., Cincinnati, O.



## Standard Engine Lathes

16 to 24 Inch Swing

—BUILT BY—

**Greaves, Klusman & Co.**

N. E. Cor. Cook & Alfred Sts., Cincinnati, O., U. S. A.

ALSO BUILDERS OF

**Pattern Makers' Lathes & Machinery  
and Metal Spinners' Lathes**

## SPEED--SPEED--SPEED



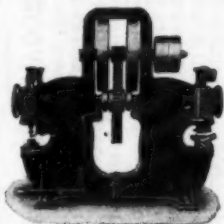
That's what you get in Merrell **Pipe Threading and Cutting Machines**. Speed - plenty of it, and **safe** speed; always under control; always in hand. The **Merrell Pipe Threading and Cutting Machines** will thread **more** iron or steel, rough or smooth pipe, no matter what the size, than **any** other machine.

This machine can be used either as a hand and power, stationary or portable, by simply removing the head. The **Chasers** are set by graduation to any size desired, are released from cutting while the machine is in motion, opened to permit the pipe being cut off and closed instantly and positively; any size, style or pitch of thread may be cut, either right or left.

Write today for further interesting facts, showing just why the Merrell is the best pipe threading machine made today

**The Merrell Mfg. Co., Toledo, O.**

## NEW DOTY Punches and Shears



**Double  
End  
Punches  
and  
Shears**

MANUFACTURED BY  
**THE NEW DOTY MFG. CO.**  
JANESVILLE, WIS.

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**15¢ Per 1000 IN QUANTITIES**

***The Best Paper Clip on the Market***

250 lots, 10c, postpaid; 1,000 lots, 30c, postpaid; 5,000 lots, \$1.25, postpaid; 25,000 lots, 15c per 1,000, f. o. b. Buffalo; 100,000 lots, 12½c per 1,000, f. o. b. Buffalo.



For business use at prices not much higher than type printing. Let us send you our specimen book, containing 100 samples.

**American Embossing Co.**  
401 SENECA BLDG. **Buffalo, N. Y.**

# PORTABLE TOOLS

## BORING ATTACHMENT FOR LATHE

Converts lathe into a horizontal boring mill, to which, within its range, it is equal in quality and quantity of output. Made for any size lathe, easily attached and true with carriage in all directions; has adjusting screw for raising and lowering bed which carries work. An inexpensive time and labor saver.

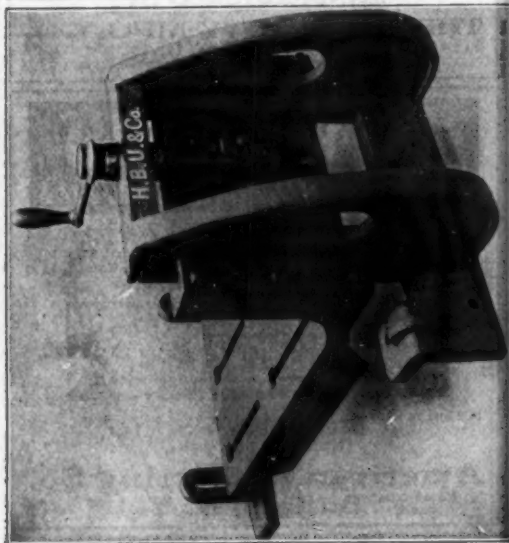
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**L. B. Flanders Machine Works**  
ESTABLISHED 1870.

**H. B. UNDERWOOD & CO.**

Proprietors

1022 Buttonwood St., : Philadelphia



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## Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

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### FOR SALE BY

**The Sumter Telephone Mfg. Co., . . . . . Sumter, S. C.**

Sander, Royal Invincible, triple drum, 30 in., in good condition.  
 2 Gear cutters, Dwight Slate Machine Co. No. 1, Style "B," automatic pinion cutters.

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### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co.**

**210-212 Washington Ave. . . . . St. Louis, Mo.**

Bolt header or forging machine, Blakeslee, 2½ in., good condition.  
 Gear cutter, universal, Brainard, 36 in.  
 Planer, Whitcomb, 36x36 in. x 8 ft.  
 Planer, Powell, 24x24 in. x 6 ft.  
 Planer, Fitchburg, 22x22 in. x 8 ft.

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### FOR SALE BY

**James Sheridan & Sons, . . . . . Franklin, Pa.**

Boiler, steam, Erie City, 40 h. p.  
 Engine, steam, Erie City, 10 h. p.  
 Engine, steam, Titusville, 12 h. p.  
 Engine, steam, Phoenix Iron Works, 40 h. p.  
 Lot of second-hand engine pulleys.  
 Fire engine, steam, Button, made in Newburg, N. Y.  
 Hammer, steam, Bement, single stand, 800 lbs.

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### FOR SALE BY

**The Cincinnati Iron Store Co.**

**Machinery and Equipment Dept. . . . . Cincinnati, O.**

Boring machine, cylinder, Pedrick & Ayer.  
 Gas or gasoline engine, Foos, 4 h. p.  
 Gas or gasoline engine, Model, 8 h. p.  
 Lathe, pulley, Stevens, 16x24 in.  
 2 Lathes, Flather, block rest, 14 in. x 6 ft.  
 Miller, Garvin No. 4½, plain.  
 Pipe cutter, C. & C., and dies from 6 in. down.  
 Tire upsetter, K. & R., 6 in.

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### FOR SALE BY

**Bosworth, Dilley & Holding Co., 735 Rockefeller Bldg., Cleveland, O.**

Boring mill, 1 head, 5 ft.  
 Boring mill, 1 head, 7 ft.  
 Boring mill, 2 heads, 8 ft.  
 Lathe, turret, American, 22 in.  
 Milling machine, Kempsmith No. 9.  
 Shaper, Walcott, 26 in.  
 Planer, Bement, 3 heads, 66x66 in. x 12 ft.  
 Planer, Miles, 2 heads, 30x30 in. x 16 ft.  
 Write for our machinery list.

## SECOND-HAND MACHINERY

### FOR SALE BY

**C. C. Wormer Mach'y Co., 94-96 W. Woodbridge St., Detroit, Mich.**

#### DRILLS.

6 in., bench, sensitive, sliding head.  
9 in., Cross & S., sensitive, 3 spdl.  
10 in., bench, sensitive, sliding head.  
10 in., Dwight Slate, bench, sensitive.  
12 in., Bement, 3 spindle.  
20 in., on column, with sliding head.  
20 in., Foote-Burt, sq. base, w. & l. fd.  
20 in., Barnes, sq. base, w. & l. feed.  
21 in., bench, sliding head.

26 in., stationary head, back gear.  
36 in., stationary head, back gear.  
Fulton No. 1, bench, sensitive.  
Harrington No. 1, suspens'n, bk. gd.  
Thorne-DeHaven, portable.  
Garvin No. 3, sensitive, 4 spindle.  
Overhanging, sensitive, sliding head.  
4 ft. 6 in., radial, Niles, back geared.  
4 ft., radial, Betts, back geared.

#### LATHES.

16x10, Fitchburg, engine, comp. rest.  
16x10, Dexter, engine, hollow spdl.  
17x6, Gray, engine, pl. in rest.  
18x8, Dexter, engine, hollow spindle.  
18x8, Star, engine, hollow spindle.  
19x8, Star, engine, hollow spindle.  
20x12, Pond, engine, comp. rest.  
20x10, Bement, engine, comp. rest.  
24x12, New Haven, engine, pl. rest.  
26x22, Pond, engine, compound rest.  
32x16, Enterprise, engine, comp. rest.  
32x16, Finfield, engine, comp. rest.  
32x18, Fulton, engine, comp. rest.  
10x5, speed lathe.  
12x5, Garvin, speed.

12x4, Garvin, speed.  
14x5, Lodge & Davis, speed.  
12x3, turret, pilot feed.  
13x5, Cleveland, turret.  
15x5, turret, hollow spindle.  
15x5, turret, automatic.  
16x4, W. & S., turret, plain head.  
16x6, Fox, turret, back geared.  
18x6, Hendey, turret, plain head.  
14x11, axle, single head.  
15x5, drilling lathe.  
31x9, Buckeye, foundry, chuck.  
40 in., column facing, 16 ft. bed.  
52 in., Stevens, pulley, back geared.  
54 in., pit lathe.

#### PIPE MACHINES.

3 to 2 in., Apex No. 1.  
2 to 2 in., hand and power, solid dies.  
1 to 4 in., Armstrong, power.

2 1/2 to 6 in., Curtis & C. No. 110, screw.  
Curtis & C. No. 64, bench, hd. or pwr.  
Curtis & C. No. 88, bench, hd. & pwr.

#### SHAPERS.

6 in., crank, cross travel 5 1/2 in.  
12 in., Hendey, geared rack.  
16 in., Gould & E., single gd. crank.  
16 in., Gould & E., back gd. crank.

22 in., Walcott, gd. rack, cross travel.  
22 in., vert. adj. 18 in., with vise.  
22 in., Lodge & Davis, geared rack.  
24 in., Hendey, friction drive pillar.

#### PRESSES.

Stiles & P. No. 2, stpg., 1 1/2 in. stroke.  
Greenerd No. 3 1/2, arbor.  
Greenerd No. 4, arbor.  
Stiles No. 5, stamping, 1 1/2 in. stroke.  
Fowler No. 2, fly wheel, 1 in. stroke.

Toledo No. 51, blanking, plain.  
Toledo No. 17, stamp'g, 20 in. throat.  
Double column, gd., Sheridan cons.  
Geared bench, on frame, 1 in. stroke.  
Heavy bench, screw.

#### PUNCHES AND SHEARS.

Peck, S. & W., 22 in., foot power, sq.  
No. 1 hand bench punch, 1 1/2 in. hole.

Doty No. 1-E, gd. pwr., 7 in. throat.  
Long & A. No. 6, 1 in. stroke.

#### PLANERS.

24x24 in. x 5 ft., Powell, single head.  
16 ft., Niles, boiler plate, open ends.

29 in. x 14 ft., plate, Sellers, auto. trip.  
48 in., Betts, widened to 72 in., 20 ft.

#### MILLING MACHINES.

Brown & S. No. 12, plain.  
Bench, geared, hand and power feed.  
Garvin No. 22, vertical, rotary table.

Index miller, with vise and plate.  
Double end valve, geared head.  
Bement, plain, table 7x27 in.

#### HAMMERS.

25 lb., helve, Bradley.  
50 lb., hand lift.  
80 lb., bench, hand lift, four poppet.  
100 lb., board lift, geared friction.

200 lb., steam, Bement, single frame.  
400 lb., board lift, Bliss, four poppet.  
Bell No. 2, steam, single frame.  
Hawkeye No. 2.

#### MISCELLANEOUS.

Boring mill, Sellers, 9 ft., fac. attach.  
Boring mch., hor., W. & S., 2 1/2 in. bar.  
Gas furnace, metal, American No. 6.  
Gear cutter, Gould & E., 36 in.

Rolls, boiler shop, 56 in. bet. uprgts.  
Rolls, boiler shop, 78 in. bet. uprgts.  
Seamer, Bliss No. 3, double.  
Wire straightener, auto., 1 1/2 x 6 ft.

Cuts or photos with detail of any of the above on application.



## SECOND-HAND MACHINERY

### FOR SALE BY

**Marshall & Hueschart Machinery Company,**

**62-66 S. Canal St., Chicago. 1024-25 Chemical Bldg., St. Louis.**

### BOLT CUTTERS.

2 dble. head, 1½ and 1½ in., auto. stop. | 2 in., Sellers.

### DRILLS.

22 in., Canedy-Otto, post.  
24 in., Barnes, back gear.  
24 in., Blaisdell, sliding hd., bk. gear.  
Quint, turret.  
Bement & Sons, arch bar.

Dallet, portable.  
Pratt & Whitney No. 1, 2 spindle.  
Garvin No. 3, 4 spindle.  
Redington, 3 spindle, sensitive.  
2 Multiple, bicycle hub.

### GRINDERS.

Sellers, twist drill, 2 in.  
Yankee, Style A, twist drill.

Springfield, surface, table 24 in x 7 ft.  
Special surface, table 16x10 in.

### HAMMERS.

100 lbs., American, post.  
500 lbs., Williams & White, drop.

1500 lbs., Bell, single frame, steam.  
6000 lbs., Morgan, doub. frame, steam.

### LATHES.

13x5, Silk-Anderson, plain rest, hollow spindle.  
14x5, Goddard, rise and fall rest, hollow spindle.  
14x6, Fish, compound rest, chuck.  
14x6, LeBlond, comp. rest, hollow spindle.  
14x6, Putnam, rise and fall rest, solid spindle.  
15x5, Bradford, plain rest, hollow spindle.  
15x6, Blaisdell, rise and fall rest, hollow spindle.  
16x6, Fifield, rise and fall rest, hollow spindle.  
17x8, Jones, rise and fall rest, solid spindle.  
18x8, Fuller, plain rest, solid spindle.

18x10, Miller, plain rest, hol. spdle.  
19x6, Fifield, rise and fall rest, solid spindle.  
19x8, Gray, comp. rest, solid spindle.  
19x12, Lodge & Davis, comp. rest, hollow spindle.  
20x12, Fifield, comp. rest, solid spdle.  
21x8, Barnes, comp. rest, solid spdle.  
22x10, Pond, comp. rest, solid spdle.  
26x12, Putnam, plain rest, hol. spdle.  
28x13, New Haven, comp. rest, solid spindle.  
36x12½ bet. centers, Hilles & Jones, compound rest, solid spindle.  
38x12, Fish, compound rest, solid spindle.  
18x42x9-12, Putnam, sliding gap.  
60 in., face plate.

### PULLEY LATHES.

26 in., Stevens.  
36 in., Niles.

48 in., Stevens.  
60 in., Niles.

### MILLING MACHINES.

Pratt & Whitney No. 2, Lincoln.  
Mossberg-Granville No. 1.

Kempsmith No. 3, back gear.  
Brown & Sharpe No. 12, plain.

### PLANERS.

18x18 in. x 4 ft., Whitcomb, 1 head.  
26x26 in. x 8 ft., Pease, 1 head.

30x30 in. x 8 ft., Wilson, 1 head.  
42x36 in. x 10 ft., New Haven, 1 hd.

### SCREW AND TURRET MACHINES.

Pratt & Whitney No. 2, screw.  
1 in., Spencer, automatic, screw.  
1 in., Cleveland, automatic, screw.

2½ in., Cleveland, automatic, screw.  
48 in., Gisholt, turret lathe.

### SHAPERS.

22 in., Walcott.  
24 in., Gould & Eberhardt.

26 in., Walcott.  
30 in., Lodge & Davis.

### MISCELLANEOUS.

Axle cut-off lathe, Bement.  
Blower, exhaust, 35 in.  
Brazing table.  
Gas cyanide furnace, No. 3.  
Nut machine, Blakeslee, 1 in., and furnace.

Oil separator.  
Profiler, Garvin.  
Slotter, portable, Morton, 24 in.  
Slotter, Bement Industrial Works No. 51.  
Vertical furnace.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Randle Machinery Co., 1739 Powers St., Cincinnati, O.**

#### ENGINES—CORLISS AND AUTOMATIC.

20x48, Wheelock, single.  
20x48, Wheelock, double.  
18x36, Wright, single.  
16x42, Hamilton, single.

16x32, Buckeye.  
16x16, Ball & Wood.  
14x14, Ball & Wood.  
11x16, Atlas.

Throttling engines—H. S. & G., 18x22; Skinner, 14x18, and smaller sizes.  
Boilers—Tubular, from 200 h. p. to 6 h. p.; fire box, from 50 h. p. to 10 h. p.; vertical, from 15 h. p. to 1 h. p.  
Lathe, Star, hollow spindle, 32 in. x 10 ft.  
Planer, New Haven, single, 33x30 in. x 9 ft.  
Shaper, Steptoe, geared, 24 in.

### FOR SALE BY

**Brown & Zortman Machinery Co., Pittsburgh, Pa.**

#### LATHES.

14 in. x 4½ ft., Putnam, rise & fall rest and chuck.  
14 in. x 6 ft., brass, American Tool Works.  
16 in. x 6 ft., Harrington, comp. rest.  
16 in. x 6 ft., Johnson, turret, turnstile feed.  
16 in., Pratt & Whitney, turret, with friction head.

16 in. x 8 ft., Johnson, comp. rest.  
18 in. x 10 ft., Schumacher & Boye, compound rest.  
24 in. x 12 ft., Clement, pattern.  
36 in., Putnam, pulley, dbl. carriage.  
28 in. x 16 ft., Fifield, comp. rest.  
16 in. x 8 ft., Putnam, axle, single end.  
26-44 in. x 10 ft., McCabe, double spindle.

#### PLANERS AND SHAPERS.

28 in., Juengst shaper, horiz'tl lever crank, table support.

28 in., Lodge & Davis shaper, rack.  
42 in. x 18 ft., Betts planer, 1 head.

#### DRILLS.

Garvin No. 2, 3 spindle, gang.  
Garvin No. 3, 4 spindle, gang.  
Bement-Miles, 6 spindle, arch bar.

Silver, 16 in., post, hand or power, with power feed and countershaft.

#### CRANES.

5 ton, hand power, traveling, 16 ft. 9 in. span, with rails.  
5 ton (2), single, I-beam, jib.

4 ton, single, I-beam, jib.  
1½ ton, single, I-beam, jib.

#### MILLING MACHINES.

Milling machine, keyseat, Mitts & Merrill No. 2.

Miller, plain, Garvin No. 4½.  
Miller, plain, Garvin No. 15.

#### MISCELLANEOUS.

Band saw, Marsden, 16 in.  
Blower, Sturtevant No. 5.  
Blower, Sturtevant No. 7.  
Bolt cutter, Schlenker No. 4, double head, 1½ in.  
Boring mill, Pratt & W., horizontal, double head, 36 in. x 14 ft.  
Cold sawing machine, Westinghouse.  
Cutter and reamer grinder, universal, Cincinnati No. 1.  
Emery grinder, double, Lancaster, 14 in. wheels.  
2 Emery grinders, dry, Webster & Berk, extra heavy.  
Engine, gas, vertical, 6 h. p.  
Engine, steam, Climax, auto., 10 h. p.  
Engine, steam, horiz'tl valve, center crank, 15 h. p.

Engine, H. S. & G., hor. slide valve, side crank, 35 h. p.  
Engine, blowing, Walker, single acting, three cylinder.  
Hammer, steam, Chambersburg, steelmakers', double leg, 1,500 lbs.  
Hammer, steam, Fox, single leg, 300 lbs.  
Keyseater, Mitts & Merrell Little Giant No. 0.  
Lathe, variety, Pringle & B., 3 in.  
Lathe, turret, Potter & Johnson's Manufacturers' No. 4.  
Pipe machine, Saunders, 4 in.  
Polishing machine, curtain pole, Pringle & Brodie.  
Tool grinder, wet, Springfield, 18 in.  
Tool grinder, wet, Springfield, 36 in.

## SECOND-HAND MACHINERY

### FOR SALE BY

Hill, Clarke & Co. of Chicago,

Chicago, Ill.

#### SPEED LATHES.

10 in. x 4 ft. Diamond.....	\$ 25
12 in. x 4 ft. ....	30
12 in. x 5 ft., Prentice.....	30

#### PLAIN TURNING LATHES.

13 in. x 5 ft., Pratt & Whitney..	\$ 65
14 in. x 4 ft., Reed.....	90
17 in. x 11 ft., Fitchburg.....	150
19 in. x 10 ft., Fitchburg.....	175
26 in. x 13 ft., Pond.....	325

#### ENGINE LATHES.

12 in. x 4 ft., Pratt & Whitney..	\$ 75
12 in. x 5 ft., Ames.....	130
13 in. x 4 ft., Pratt & W., taper.	225
13 in. x 5 ft., Blaisdell.....	135
13 in. x 5 ft., Prentiss.....	135
13 in. x 6 ft., Blaisdell.....	100
14 in. x 4 ft., Reed.....	165
14 in. x 4 ft., Blaisdell.....	130
14 in. x 4 ft., Reed.....	150
14 in. x 5 ft., Blaisdell.....	115
14 in. x 6 ft., Blaisdell.....	120
14 in. x 6 ft., Flather.....	150
14 in. x 6 ft., Prentice.....	140
14 in. x 6 ft., Lodge & Davis....	190
15 in. x 4 ft., Blaisdell.....	130
16 in. x 6 ft., Blaisdell.....	175
16 in. x 8 ft., Putnam.....	140
17 in. x 6 ft., Blaisdell.....	215
18 in. x 6 ft., New Haven.....	125
18 in. x 6 ft., Hamilton.....	315
18 in. x 6 ft., Bradford.....	250
18 in. x 8 ft., Hamilton.....	330
20 in. x 9 ft., Hamilton.....	370
21 in. x 10 ft., Bogart, taper....	400
32 in. x 12 ft., Gleason.....	675

#### MILLING MACHINES.

Reed No. 2, hand.....	\$ 100
Oesterlein No. 24, universal....	575
Becker No. 2, vertical.....	300
Kemp Smith, hand.....	125
Brainard, 36 in., gear cutter....	600
22 in. x 12 ft., Newton.....	1,000

#### PUNCH PRESSES.

Foot press .....	\$17.50
Niagara No. 4, inclined.....	85
R. & K. No. 1, inclinable.....	90
Ferracute No. 1.....	125
R. & K. No. 2.....	125
R. & K., saddle press, 25 ton...	150
Stiles No. 3.....	175
Crosby No. 40, back geared....	175
Ferracute, P 3.....	190
Crosby No. 45.....	225
B. & O. No. 4, inclinable.....	270
R. & K. No. 4-0, back geared..	300
Ferracute No. DG23, back gear	300
Crosby No. 70.....	350
Stiles No. 5, back geared.....	450
Bliss No. 13, drawing press....	500
Bliss No. 74, back geared.....	600
Bliss No. 75, back geared.....	850

#### GRINDERS AND BUFFERS.

Springfield, surface grinder....	\$350
Automatic cutter grinder.....	75
Twist drill grinder.....	30
Brainard, bench grinder.....	90
14 in., Detroit.....	20
24 in., Bridgeport, water grinder	50
36 in., Springfield, water grinder	60
Diamond No. 2, bench buffer...	9

#### SHAPERS AND PLANERS.

16 in., Gould & E., b. g. crank..	\$ 280
24x24 in. x 5 ft., Whitcomb.....	300
24x24 in. x 6 ft., Gray.....	525
25x25 in. x 7 ft., Whitcomb....	350
30x30 in. x 10 ft., Fitchburg....	600
41x36 in. x 12 ft., New Haven...	950
54x54 in. x 9 ft., Sellers.....	1,500

#### DRILLS AND BORING MACHINERY

20 in., Prentice.....	\$ 55
25 in., Snyder drill.....	160
40 in., Bement.....	225
51 in., Bement.....	350
Friction, No. 3.....	100
4 spindle, Barr.....	120
Beamman horiz'l boring machine.	400
Crosby horizontal boring mill.	400
Sellers cylinder boring mach....	1,000
37 in., Bausch vert. boring mill.	1,100

#### TURRET MACHINERY.

1 in., Bardons & Oliver.....	\$ 190
Pratt & Whitney No. 2.....	225
3 in., Garvin.....	150
1 in., Windsor.....	170
14 in., Garvin.....	235
14 in., Garvin, plain.....	140
2 in., Garvin, double turret....	375
14 in., Pearson.....	240
24 in., Pearson, forming mache	425
Pratt & Whitney No. 24.....	275
Pearson, screw machine.....	375
3 in., Garvin, forming machine	350
16 in., American Fox lathe....	225
Lodge & Davis, screw machine	450

#### MISCELLANEOUS.

Bolt cutter, Merriman, 14 in....	\$125
Centering machine, Whiton, 34 in.	45
Cut-off machine, H. & R., 2 in..	40
Hammer, drop, Bliss, 100 lbs....	50
Hammer, power, DuPont, 50 lb.	125
Hammer, Kane & Roach, 60 lbs.	125
Hammer, drop, Mossberg, 200 lb.	225
Hammer, drop, P. & W., 1,000 lb.	800
Keyseater, Morton, 18 in.....	150
Lathe, pulley, Pond, 30 in.....	300
Lathe, pulley, Stevens, 36 in....	525
Pipe cutter, roller, B. & K. No. 4.	40
Profiler, Garvin.....	250
Punch & shear, Long & A. No. 8	65
Reaming stand, Flather No. 2..	50
Shear, rotary, Bliss No. 107....	125
Tube cutter, Fox, 14 in.....	15

## SECOND-HAND MACHINERY

### FOR SALE BY

**Frevert Machinery Co., . . . 18 Dey St., New York City**

#### LATHES.

60 in. x 40 ft., Pond.	15 in. x 6 ft., Blaisdell.
60 in., pulley, New Haven.	13 in. x 6 ft., Blaisdell.
18 in. x 8 ft., Rahn, taper attachment.	12 in. x 4 ft., speed, Stewart.

#### DRILLS.

24 in., Aurora.	13 in., sensitive, Slate.
20 in., sliding head.	14 in., sensitive, Barr.

#### MISCELLANEOUS.

Miller, vertical, Becker-Br'd No. 2.	Pipe machine, Saunders, 3 in.
Miller, Lincoln, Pratt & W. No. 2.	Shaper, crank, 16 in.

### FOR SALE BY

**Chas. Federspil Machinery Co., . 238 Broadway, Cincinnati, O.**

#### DRILLS.

21 in., Aurora, stationary head.	36 in., bk. gd., power feed., sq. base.
22 in., Champion, post.	Sibley, new, any size.

#### LATHES.

12 in. x 5 ft., Sebastian.	9 in. x 40 in., C. & J., foot power.
18 in. x 8 ft., Lodge & Barker.	14 in. x 5 ft., Lodge & Barker, turret.
18 in. x 8 ft., Blaisdell.	36 in., Stevens, pulley lathe.

#### SHAPERS.

15 in., Kelley.	16 in., Sheppard.
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#### MISCELLANEOUS.

Blower, Connersville No. 3.	Hack saws, power.
Boring mill, car wheel, 42 in.	Hammer, foot power.
Engines, gasoline, Otto, 12 h. p.	Hoist, Maris, 8 ton.
Engines, gasoline, Advance, 20 h. p.	Planer, iron, 30x30 in. x 10 ft.
Engines, gasoline, Dean, 25 h. p.	Press, Robinson No. 4.
Engines, twin, gasoline, Fairbanks,	Pump, duplex, McGowan, 12x8½x10.
50 h. p.	Punch and shear, Doty.
Gear cutter, spur, 22 in.	Anvils, vises, forges, iron safes.

### FOR SALE BY

**O. L. Packard Machinery Co., . Chicago, Ill., and Milwaukee, Wis.**

#### LATHES.

13 in. x 5 ft.	18 in. x 12 ft., Blaisdell.
13 in. x 6 ft., Prentiss.	20 in. x 14 ft., Bradford.
14 in. x 6 ft., Putnam.	20 in. x 14 ft., Springfield.
15 in. x 6 ft., Perkins.	24 in. x 16 ft., New Haven.
16 in. x 6 ft., Prentice.	28 in. x 12 ft.
16 in. x 6 ft., Walcott.	

#### PLANERS.

30x26 in. x 7 ft.	36x36 in. x 12 ft.
33x23 in. x 14 ft.	

#### MILLERS.

Garvin No. 4.

#### MISCELLANEOUS.

Bending rolls, power, 32 in.	Grinder, drill, Washburn.
Centering machine.	Grinder, Gorton, double disc.
Cold saw, circular, small.	Polishing machine, belt.
Cut-off machine, Hurlbut & R., 3 in.	Riveter, adt. ½ in.
Drill, 3 spindle, heavy pattern.	

## SECOND-HAND MACHINERY

### FOR SALE BY

**The H. A. Stocker Machinery Co., . 20-22 S. Clinton St., Chicago.**

#### PLANERS.

16x16 in. x 3 ft., New Haven.  
20x20 in. x 4 ft., Pratt & Whitney.  
22x22 in. x 5 ft., Wheeler, equal to new.  
22x22 in. x 5 ft., Flather, good as new.

#### SHAPERS.

16 in., Cincinnati, equal to new.  
20 in., Hendey.  
24 in., Hendey.

#### MILLING MACHINES.

Becker-Brainard No. 5 C.  
Cincinnati No. 1, swivel table.  
Garvin No. 3, plain, back gear.  
Garvin No. 2, Lincoln pattern.

#### DRILLS.

15 in., Aurora, bench.  
24 in., Prentice, sliding head.  
26 in., Barnes, sl. head, back gear.  
28 in., Blaisdell, sl. head, back gear.  
40 in., Aurora, sl. hd., b. g., p. f.

#### LATHES.

9 in. x 4 ft., Shephard.  
14 in. x 6 ft., Reed, cp. rest and taper.  
15 in. x 6 ft., Von Wyck, center rest and taper.  
16 in. x 6 ft., Perkins.  
16 in. x 8 ft., Fitchburg.  
17 in. x 7 ft., Blaisdell.  
18 in. x 10 ft., Flather, c. r. & chuck.  
20 in. x 16 ft., Union Machine Co.

#### SCREW AND TURRET MACHINES.

12 in., Lodge & Davis, turret lathe.  
16 in., Garvin, turret lathe.  
16 in., Lodge & Davis, turret lathe.  
16 in., Warner & S., turret lathe.  
18 in., Fitchburg, chucking lathe.  
20 in., Bridgeport, chucking lathe.  
21 in., Gisholt, turret lathe.

#### KEY-SEATERS.

Baker Bros. No. 2.

#### PIPE MACHINES.

2 in., Jarecki No. 7.  
2 in., Bignall & K., P. D. Q. No. 2.

#### GRINDERS.

2 Blount, 1 1/2 in. spindle, heavy.  
2 Detroit No. 5, 2 in. spindle.  
Diamond No. 7 1/2, Stand, 1 1/2 in. spindle.

#### MISCELLANEOUS.

Bolt cutter, Merriman, 2 1/2 in.  
Boring mill, Bullard, 39 in.  
Bulldozer, Williams & White No. 2.  
Furnace, Bradley No. 9.  
Furnace, gas, Stewart.  
Gear cutter, Walcott, 20 in., semi-automatic.  
Grinder, Brown & Sharpe No. 3, universal.  
Grinder, Diamond No. 1, universal.  
Grinder, Detroit, 2 in. spindle.  
Hammer, drop, Mosberg, automatic, 300 lbs.

24x24 in. x 8 ft., Putnam, fine order.  
26x26 in. x 8 ft., Lodge & Davis.  
30x30 in. x 8 ft., Flather, 2 heads.  
32x32 in. x 10 ft., Lodge & D., 2 hds.  
36x36 in. x 8 ft., Smith-Silk, 1 head.

26 in., Smith-Mills, fine order  
26 in., Walcott, good order.

Garvin No. 3, hand.  
Kempsmith No. 10, hand.  
Garvin No. 11, hand.  
Pratt & W. No. 2, Lincoln pattern.

5 ft., Niles, radial, semi-universal.  
Woodward & Rogers, 1 spindle.  
Woodward & Rogers, 2 spindle.  
2 Foote-Burt, 3 spindle.  
2 Foote-Burt, 4 spindle.

20 in. x 8 ft., Fifield.  
24 in. x 12 ft., Blaisdell, center rest.  
24 in. x 14 ft., Union Machine Co., compound rest.  
28 in. x 16 ft., Putnam, comp. rest.  
30 in. x 32 ft., Pond, shafting.  
36 in. x 24 ft., Union Machine Co., engine.  
48 in., Putnam, pulley, double tool.

48 in., turret chucking machine.  
1 1/2 in., Warner & Swasey, screw machine.  
Bardons & O. No. 5, screw machine.  
Lodge & D. No. 7, screw machine.  
Lodge & D. No. 3, screw machine.  
Pratt & W. No. 2, screw machine.

Davis Machine Co. No. 2.

4 in., Jarecki No. 9.  
6 in., Merrell No. 6 1/2.

2 Detroit No. 3, 1 1/2 in. spindle.  
45 Small grinders, 3/4, 1/2, 3/8 and 1 in. spindles.

Hammer, drop, P. & W., automatic, 800 lbs.  
Lathes, brass, American.  
Press, power, Crosby No. 5, geared.  
Press, power, Toledo No. 32.  
Press, power, Toledo No. 23.  
Press, Consolid'd No. 65 A, geared.  
Profiler, Garvin, single spindle.  
Punch and shear, Long & A. No. 5, double end.  
Shafting straightener, Medart, 28 ft., good as new.  
Tapping machine, vertical.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Western Machinery Co., . . . 91 Perin Bldg., Cincinnati, O.**  
**C. H. Norton, Manager.**

Drills, 20, 22 and 24 in.  
Engine lathes, 16x7, 16x8, 18x7, 18x8, 18x10 and others larger.  
2 Millers, Garvin, plain.  
Shaper, Steptoe, 28 in.  
Turret lathe, Jones & Lamson.  
Also plain and water tube boilers, steam and gas engines, all sizes; pumps, heaters, etc.  
We are constantly in need of good machinery and will pay cash for it.  
What have you to sell or trade. Write us.

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### FOR SALE BY

**The W. M. Pattison Supply Co., 197 St. Clair Av., N. E., Cleveland, O.**

Boring mill, Betts, vertical, 6 ft., with 2 swivel heads, uprights set back to allow swing of 100 inches.  
Boring machine, Niles, vertical, 60 in.  
Hammer, helve, Bradley, 25 lb.  
Hammer, helve, Bradley, 80 lb.  
Hammer, steam, Bell, 700 lb.  
Lathe, turret, American Tool & Machine Co. No. 2.  
Planer, Lathe & Morse, crank, 12 in.  
Planer, Gray, 22x22 in. x 5 ft.  
Planer, Gleason, 28x28 in. x 9 ft.

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### FOR SALE BY

**H. B. Stimson, . . . 137-139 Washington St., Buffalo, N. Y.**

Boiler, vertical, 20 h. p.  
Boiler, horizontal, portable, 20 h. p.  
Boiler and engine, combined, vertical, 10 h. p.  
Engine, gas, horizontal, 15 h. p.  
Engine, gas, vertical, 6 h. p.  
Engine, steam, Nagle, automatic, 8x10.  
Engine, steam, Nagle, automatic, 9x12.  
Exhaust fan, Sturtevant No. 6, 11 in. outlet.  
Exhaust fan, Champion No. 9, 13 in. outlet.  
Lathe, engine, 25 in. x 13 ft.  
Pump, steam, Hall, duplex, 12x7x12 in.

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### FOR SALE BY

**Belting & Machinery Co., . 299-303 State St., Rochester, N. Y.**

#### ENGINES.

10x12, Heald, center crank.	20x24, Woodbury, side crank.
11x16, Woodbury, side crank.	9 h. p. Truscott, gasoline, marine.
14x24, Buckeye.	18 h. p. Foos, gasoline engine.

#### LATHES.

15x6, Porter.	20x6, Ames.
15x8, Draper.	B. & S., polishing and finishing.
16x8, Pond.	

#### MISCELLANEOUS.

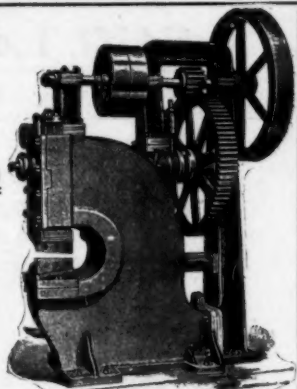
Elevator, electric, Graves, direct connected, 2,500 lbs.	3 Hydraulic presses, 30, 50 & 80 tons.
Fan, Sturtevant, direct connected, 80 in., 36 in. inlet, 30 in. outlet.	Shaper, Steptoe, 15 in.
	Planer, Whitcomb, 24x24x6.

All kinds of second-hand machinery bought and sold.

**"CINCINNATI"**

**Power  
Punches,  
Shears,  
Rolls**

**PATENT  
IMPROVED**



**The Cincinnati Punch & Shear Co., Cincinnati, O.**

## **Woodworking Machinery**

If you are in search of machinery for working wood, write to the publisher for a copy of **The Machinery List**, containing the advertisements of all the leading manufacturers of wood-working tools, as well as complete lists of second-hand machinery in market. Mailed **free**, on receipt of request, to anybody, anywhere on earth.

**A. H. HITCHCOCK, : : Publisher**  
**626-627 Monadnock Block, CHICAGO, ILL.**

# Stiff Legs

## Make Stout Benches



**I**F you've benching to install, don't fail to look up the "**New Britain**" system, if you would save on the expense involved, and have benches that you can move, if needful.

Don't build benches and fasten them to the wall, but make them independent—self-sustained. Use "**New Britain**" Bench Legs.

*Get our Bench Making Leaflets,  
that tell of our patented system*

**THE NEW BRITAIN MACHINE CO.**  
**60 Chestnut St., NEW BRITAIN, CONN.**